

WHAT IS CLAIMED IS:

1. A method for responding to a virus alert, the virus alert containing information pertaining to a new virus, the method comprising:

receiving the virus alert;

assessing a risk level associated with the new virus, the risk level indicating a risk of relatively significant damage caused by an infection of the new virus on a computer system; and

obtaining a program code when the risk level indicates that the new virus may pose a significant risk of relatively significant damage on the computer system, the program code being configured to substantially combat the new virus.

2. The method as recited in claim 1 wherein assessing the risk level associated with the new virus includes:

obtaining information associated with at least one previous virus which has caused a previous infection on the computer system; and

comparing the information pertaining to the new virus with the information associated with the previous virus which has previously caused the previous infection on the computer system.

3. The method as recited in claim 2 wherein the previous virus and the new virus are of a first type, and the information associated with the previous virus which has caused the previous infection on the computer system includes data associated with a duration of the infection and a scope of the infection.

4. The method as recited in claim 3 wherein when the previous infection has a relatively long duration and a relatively significant scope, the risk level indicates that the new virus may pose the significant risk of relatively significant damage on the computer system.

5. The method as recited in claim 2 wherein the information associated with the previous virus which has caused the previous infection on the computer system is stored in a profile on a database associated with the computer system.

5 6. The method as recited in claim 1 wherein the virus alert is received from an anti-virus information source.

7. The method as recited in claim 6 wherein the virus alert is automatically received from the anti-virus information source.

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8. The method as recited in claim 7 wherein receiving the virus alert includes acquiring the virus alert from the anti-virus information source.

9. The method as recited in claim 1 wherein the computer system is a computer network, the computer network including a plurality of computing devices.

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10. A computer program product responding to a virus alert, the virus alert being arranged to provide information pertaining to a new virus, the computer program product comprising:

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computer code for receiving the virus alert;

computer code for assessing a risk level associated with the new virus, the risk level indicating a risk of a significant new infection by the new virus on a computer system;

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computer code for obtaining program code when the risk level indicates that the new virus may pose a significant risk of the significant new infection on the computer system, the program code being configured to substantially combat the new virus; and.

a computer-readable medium that stores the computer codes.

11. The computer program product as recited in claim 10 wherein the computer code for assessing the risk level associated with the new virus includes:

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computer code for obtaining information associated with at least one previous virus which has previously caused an infection on the computer system; and

computer code for comparing the information pertaining to the new virus with the information associated with the previous virus which has previously caused the infection on the computer system.

12. The computer program product as recited in claim 11 wherein the previous virus and the new virus are of a first type, and the information associated with the previous virus which has previously caused the infection on the computer system includes data associated with a duration of the infection and a scope of the infection.

13. The computer program product as recited in claim 10 wherein the computer-readable medium is one selected from the group consisting of a hard disk, a CD-ROM, a DVD, a computer disk, a tape drive, a computer memory, and a data signal embodied in a carrier wave.

14. A computer system suitable for responding to a virus alert, the virus alert being providing information pertaining to a new virus, the computer system comprising:

computer code for receiving the virus alert;

computer code for assessing a risk level associated with the new virus, the risk level being arranged to indicate a risk of a relatively significant infection by the new virus on the computer system;

computer code for obtaining code when the risk level indicates that the new virus may pose a significant risk of the relatively significant infection on the computer system, the code being configured to substantially combat the new virus;

a computer-readable medium that stores the computer codes; and  
a processor that executes the computer codes.

15. The computer system as recited in claim 14 wherein the computer code for assessing the risk level associated with the new virus includes:

computer code for obtaining information associated with at least one previous virus which has previously caused an infection on the computer system; and

computer code for comparing the information pertaining to the new virus with the information associated with the previous virus which has previously caused the infection on the computer system.

16. The computer system as recited in claim 15 wherein the previous virus and the new virus are of a first type, and the information associated with the previous virus which has previously caused the infection on the computer system includes data associated with a duration of the infection and a scope of the infection.

17. A method for predicting the incidence of a virus in a computer system, the method comprising:

obtaining information relating to a new virus;

obtaining information relating to a plurality of viruses which have previously infected the computer system; and

comparing the information relating to the new virus to the information relating to the plurality of viruses which have previously infected the computer system, wherein comparing the information relating to the new virus to the information relating to the plurality of viruses which have previously infected the computer system includes determining a risk level associated with the new virus based on the information relating to the plurality of viruses which have previously infected the computer system, the risk level being indicative of a risk posed by the new virus to the computer system.

18. The method as recited in claim 17 wherein comparing the information relating to the new virus to the information relating to the plurality of viruses which have previously infected the computer system further includes:

determining a virus type associated with the new virus, the virus type being included in the information relating to the new virus; and

identifying at least a first previous virus which has previously infected the computer system, the first previous virus being included in the plurality of viruses which have previously infected the computer system, the first previous virus having the virus type associated with the new virus.

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19. The method as recited in claim 18 wherein comparing the information relating to the new virus to the information relating to the plurality of viruses which have previously infected the computer system further includes:

determining when an infection caused by the first previous virus was prolonged;

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determining when the infection caused by the first previous virus was widespread.

20. The method as recited in claim 19 wherein when it is determined that the infection caused by the first previous virus was prolonged and when it is determined that the infection caused by the first previous virus was widespread, the risk level associated with the new virus is a high risk level.

21. The method as recited in claim 20 wherein when the risk level associated with the new virus is a high risk level, the method further includes:

obtaining software configured to protect the computer system against the new virus; and

applying the software within the computer system.

22. The method as recited in claim 19 wherein when it is determined that the infection caused by the first previous virus was not prolonged and when it is determined that the infection caused by the first previous virus was widespread, the risk level associated with the new virus is a medium risk level.

23. The method as recited in claim 19 wherein when it is determined that the infection caused by the first previous virus was prolonged and when it is determined that the

infection caused by the first previous virus was not widespread, the risk level associated with the new virus is a medium risk level.

24. The method as recited in claim 19 wherein when it is determined that the infection caused by the first previous virus was not prolonged and when it is determined that the infection caused by the first previous virus was not widespread, the risk level associated with the new virus is a low risk level.

25. The method as recited in claim 17 wherein comparing the information relating to the new virus to the information relating to the plurality of viruses which have previously infected the computer system further includes:

determining a virus type associated with the new virus, the virus type being included in the information relating to the new virus; and

determining when at least a first previous virus which has previously infected the computer system has the same virus type as the new virus exists, the first previous virus being included in the plurality of viruses which have previously infected the computer system, wherein when the first previous virus having the same virus type as the new virus does not exist, the risk level associated with the new virus is an unknown risk level.

26. The method as recited in claim 17 further including:

creating characterizations for each virus included in the plurality of viruses which have previously infected the computer system; and

storing the characterizations in a database, wherein obtaining the information relating to the plurality of viruses which have previously infected the computer system includes obtaining the characterizations from the database.

27. The method as recited in claim 26 wherein creating the characterizations for each virus included in the plurality of viruses which have previously infected the computer system includes:

determining a duration of an infection associated with each virus; and

determining whether the infection associated with each virus was widespread.

28. The method as recited in claim 27 further including:

creating trends associated with the characterizations, wherein obtaining the  
5 information relating to the plurality of viruses which have previously infected the  
computer system includes obtaining the trends from the database

29. The method as recited in claim 17 wherein the information relating to the plurality  
of viruses which have previously infected the computer system is stored on a database  
10 that is associated with the computer system.

30. The method as recited in claim 17 wherein the information relating to the new  
virus is obtained from an anti-virus website.

31. The method as recited in claim 17 wherein the computer system is a computer  
15 network, the computer network including at least two networked computing devices.

32. A computer program product for predicting the incidence of a virus in a computer  
system, the computer program product comprising:

20 computer code for obtaining information relating to a new virus;  
computer code for obtaining information relating to a plurality of viruses which  
have previously infected the computer system;

computer code for comparing the information relating to the new virus to the  
information relating to the plurality of viruses which have previously infected the  
25 computer system, wherein the computer code for comparing the information relating to  
the new virus to the information relating to the plurality of viruses which have previously  
infected the computer system includes computer code for determining a risk level  
associated with the new virus based on the information relating to the plurality of viruses  
which have previously infected the computer system, the risk level being indicative of a  
30 risk posed by the new virus to the computer system; and

a computer-readable medium that stores the computer codes.

33. The computer program product as recited in claim 32 wherein the computer code for comparing the information relating to the new virus to the information relating to the plurality of viruses which have previously infected the computer system further includes:

computer code for determining a virus type associated with the new virus, the virus type being included in the information relating to the new virus; and

computer code for identifying at least a first previous virus which has previously infected the computer system, the first previous virus being included in the plurality of viruses which have previously infected the computer system, the first previous virus having the virus type associated with the new virus.

34. The computer program product as recited in claim 33 wherein the computer code for comparing the information relating to the new virus to the information relating to the plurality of viruses which have previously infected the computer system further includes:

computer code for determining when an infection caused by the first previous virus was prolonged; and

computer code for determining when the infection caused by the first previous virus was widespread.

35. The computer program product as recited in claim 34 wherein:

when it is determined that the infection caused by the first previous virus was prolonged and when it is determined that the infection caused by the first previous virus was widespread, the risk level associated with the new virus is a high risk level,

when it is determined that the infection caused by the first previous virus was not prolonged and when it is determined that the infection caused by the first previous virus was widespread, the risk level associated with the new virus is a medium risk level,

when it is determined that the infection caused by the first previous virus was prolonged and when it is determined that the infection caused by the first previous virus



was not widespread, the risk level associated with the new virus is a medium risk level,  
and

when it is determined that the infection caused by the first previous virus was not  
prolonged and when it is determined that the infection caused by the first previous virus  
5 was not widespread, the risk level associated with the new virus is a low risk level.

36. The computer program product as recited in claim 32 wherein the computer code  
for comparing the information relating to the new virus to the information relating to the  
plurality of viruses which have previously infected the computer system further includes:

10 computer code for determining a virus type associated with the new virus, the  
virus type being included in the information relating to the new virus; and

computer code for determining when at least a first previous virus which has  
previously infected the computer system has the same virus type as the new virus exists,  
the first previous virus being included in the plurality of viruses which have previously  
15 infected the computer system, wherein when the first previous virus having the same  
virus type as the new virus does not exist, the risk level associated with the new virus is  
an unknown risk level.

37. The computer program product as recited in claim 32 further including:

20 computer code for creating characterizations for each virus included in the  
plurality of viruses which have previously infected the computer system; and

computer code for storing the characterizations in a database, wherein the  
computer code for obtaining the information relating to the plurality of viruses which  
have previously infected the computer system includes computer code for obtaining the  
25 characterizations from the database.

38. The computer program product as recited in claim 37 wherein the computer code  
for creating the characterizations for each virus included in the plurality of viruses which  
have previously infected the computer system includes:

computer code for determining a duration of an infection associated with each virus; and

computer code for determining whether the infection associated with each virus was widespread.

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39. The computer program product as recited in claim 32 wherein the computer code for obtaining the information relating to the current virus includes computer code for obtaining the information relating to the new virus from an anti-virus website.

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40. The computer program product as recited in claim 39 wherein obtaining the information relating to the new virus includes receiving the information from the anti-virus website.

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41. The computer program product as recited in claim 32 wherein the computer-readable medium is one selected from the group consisting of a hard disk, a CD-ROM, a DVD, a computer disk, a tape drive, a computer memory, and a data signal embodied in a carrier wave.

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42. A computer system, the computer system being configured to predict the incidence of a virus in the computer system, the computer system comprising:

a database;

computer code for obtaining information relating to a new virus;

computer code for obtaining information relating to a plurality of viruses which have previously infected the computer system from the database;

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computer code for comparing the information relating to the new virus to the information relating to the plurality of viruses which have previously infected the computer system, wherein the computer code for comparing the information relating to the new virus to the information relating to the plurality of viruses which have previously infected the computer system includes computer code for determining a risk level

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associated with the new virus based on the information relating to the plurality of viruses

which have previously infected the computer system, the risk level being indicative of a risk posed by the new virus to the computer system;

a computer-readable medium that stores the computer codes; and

a processor that executes the computer codes.

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43. The computer system as recited in claim 42 wherein the computer code for comparing the information relating to the new virus to the information relating to the plurality of viruses which have previously infected the computer system further includes:

computer code for determining a virus type associated with the new virus, the

10 virus type being included in the information relating to the new virus; and

computer code for identifying at least a first previous virus which has previously infected the computer system, the first previous virus being included in the plurality of viruses which have previously infected the computer system, the first previous virus having the virus type associated with the new virus.

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44. The computer system as recited in claim 43 wherein comparing the information relating to the new virus to the information relating to the plurality of viruses which have previously infected the computer system further includes:

determining when an infection caused by the first previous virus was prolonged;

20 and

determining when the infection caused by the first previous virus was widespread.

45. The computer system as recited in claim 44 wherein when it is determined that the infection caused by the first previous virus was prolonged and when it is determined that the infection caused by the first previous virus was widespread, the risk level associated with the new virus is a high risk level.

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46. The computer system as recited in claim 45 wherein when the risk level associated with the new virus is a high risk level, the computer system further includes:

computer code for obtaining a driver configured to protect the computer system against the new virus; and

computer code for applying the driver within the computer system.

5 47. A method for protecting a system against a first virus, the method comprising:  
executing an anti-virus application on the system; and  
executing a virus incidence prediction application on the system, the virus  
incidence prediction application being configured to compare information relating to the  
first virus to information relating to viruses which have previously infected the system to  
10 determine a risk level of infection associated with the first virus, the risk level of  
infection being indicative of a risk posed by the current virus to the system, wherein the  
virus incidence prediction application executes in parallel with the anti-virus application.

15 48. The method as recited in claim 47 wherein executing the virus incidence  
prediction application on the system includes:  
obtaining the information relating to the first virus;  
obtaining the information relating to the viruses which have previously infected  
the system.

20 49. The method as recited in claim 48 wherein when it is determined that the risk  
level of infection associated with the first virus is higher than a particular risk level,  
executing the virus incidence prediction application on the system further includes:  
obtaining a driver configured to combat the first virus; and  
providing the driver to the anti-virus application, wherein the anti-virus  
25 application is configured to apply the driver to protect the system against the first virus.

50. The method as recited in claim 48 wherein obtaining the information relating to  
the first virus includes obtaining the information relating to the first virus from a source,  
the source being external to the system.

30 51. The method as recited in claim 50 wherein the source is an anti-virus website.

52. The method as recited in claim 48 wherein obtaining the information relating to the viruses which have previously infected the system includes:

accessing a database associated with the system, the database being configured to store profiles associated with the viruses which have previously infected the system; and obtaining the profiles associated with the viruses which have previously infected the system.

53. The method as recited in claim 52 wherein the profiles associated with the viruses which have previously infected the system include characterizations of a duration of each infection associated with the viruses which have previously infected the system and characterizations of whether each infection was widespread.

54. The method as recited in claim 53 wherein executing the virus incidence prediction application on the system further includes:

creating the profiles associated with the viruses which have previously infected the system.

55. The method as recited in claim 47 wherein the first virus is not present on the system.

56. The method as recited in claim 47 wherein the system is a network, the network including a plurality of computer systems.